CONSERVATION Showcase

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# At 70, Van Diest Keeps Himself and Cropland In-Shape

*Jason Johnson, Public Affairs Specialist, May 2011*

Running a 20 kilometer (12.4 mile) road race at the age of 70 is quite an achievement, but for corn and soybean farmer Arlo Van Diest of Hamilton County his accomplishments protecting cropland soils from wind and water erosion are equally impressive.

Van Diest recently completed his 20th consecutive Dam to Dam, a road race from the Saylorville Dam on Des Moines' north side to downtown Des Moines. But running is just Van Diest's hobby – taking a backseat to his skills as a farmer. He is foremost a successful conservation farmer – Van Diest converted to strip-till nearly 10 years ago, after attending the Commodity Classic in Florida.

North central Iowa's heavy, wet soils make no-till farming a challenge. Van Diest is doing the next best thing. His strip-till system leaves large amounts of crop residue that help protect against erosion from wind and water. Van Diest leaves the soil and crop residue undisturbed from harvest to planting. During the planting process he clears a small strip of residue for simultaneous planting and fertilizer application.

Barb Stewart, state agronomist for USDA's Natural Resources Conservation Service (NRCS), says Van Diest's system reduces the number of trips a farmer needs to make through a field, saving considerable time and money. "It also helps reduce soil compaction," she says. "And, with the use of GPS guided tractors, precision farming makes strip-till easier, reduces input costs and can increase overall yields."

With the high corn prices, Van Diest is mostly using strip-till while planting corn-on-corn. "I felt corn-on-corn was the route to go from an economic standpoint, and I think that's when you see the most benefit from strip-till," he said. "I plant between the existing cornstalks and get a nice clean row. I was concerned about disease, but I haven't seen any signs of that."

*Arlo Van Diest started strip-till in 2002, shortly after learning about it at the Commodity Classic in Florida.*

"My weed control has been easier to handle with strip-till than with conservation tillage, too" he added.

Eileen Bader with The Nature Conservancy says Van Diest is one of the most respected farmers around. "Other farmers listen to him, and respect the success he's had in farming," she said. "Several area farmers are trying strip-till because of him."

In fact, Van Diest says he has helped convert at least three farmers in the Boone River Watershed to strip-till. "I try to sell it for the economic benefits, but the real reward is the conservation benefits," he said.

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*Arlo Van Diest uses his strip-till planter to plant soybeans into corn residue on at his field in northern Hamilton County. Strip-till opens up a small path for seedbed and fertilizer application, but leaves the rest of the field 90 to 100 percent covered with residue.*

Van Diest says it's difficult to convince farmers to change the way they do things. "It's a behavior pattern of 'this is the way we do it'" he said, "but there are also some costs involved transitioning to strip-till. If you buy your own [strip-till] applicator, it may cost $70,000 or more, depending on what you get."

**MRBI**

Van Diest says it is his goal to get every row crop farmer in two sub-watersheds of the Boone Watershed – Fox Creek and Lyons Creek – to convert to strip-till.

And, coincidentally, there are enhanced financial incentives for local farmers to try new practices like strip-till through the USDA's Mississippi River Basin Healthy Watersheds Initiative (MRBI).

The goal of the MRBI is to reduce nutrient loading in the Mississippi River Basin, which contributes to both local water quality problems and the hypoxic zone in the Gulf of Mexico. Farmers in eight sub-watersheds in the larger Boone River Watershed can receive higher than normal payment rates to implement new conservation practices that avoid, control and trap nutrient runoff, as well as improve wildlife habitat and maintain agricultural productivity. A sample of these practices includes cover crops, prescribed grazing, strip-till, and nutrient management.

There are 10 MRBI projects across Iowa – each with its own distinct set of eligible practices. Visit your lo-

*A location is marked where a denitrifying bioreactor will be installed in early June. Bruce Voigts, MRBI Coordinator for the Boone River Watershed, says the bioreactor will filter nutrients flowing from Van Diest's field to a nearby stream in the White Fox Creek Watershed.*

cal NRCS office to see if your farm is in one of these areas, or check online at www.ia.nrcs.usda.gov/programs/MRBI.html.

**Cover Crops**

Van Diest was not eligible to receive MRBI payments for strip-till since he was already performing the practice, but he is trying three other new practices. Last September, he aerial applied a cereal rye cover crop on two fields totaling 141 acres. What he saw surprised him. "It was totally shocking how quickly the seed germinated," he said. "The roots were just searching for a place to go."

Cover crops, such as winter rye, need to be sprayed a few weeks prior to planting corn. Van Diest says they sprayed the cover crop with RoundUp® in early May, before planting on May 18-19.

Cover crops provide several benefits, including reduced soil erosion, less fertilizer and herbicide costs, improved soil health, and water quality protection.

**Denitrifying Bioreactor/Monitoring**

Van Diest is also implementing a denitrifying bioreactor. He will monitor and evaluate the water that filters through it. Bioreactors are underground structures filled with a carbon source, such as wood chips, that intercept and treat tile water flow and reduce nitrate levels in water leaving agricultural land and entering streams.

Van Diest installed a bioreactor a few years ago with support from the Iowa Soybean Association (ISA). This time he is receiving assistance through the MRBI and ISA. "It's a real win-win for Arlo," says Bruce Voigts, who coordinates the MRBI in the Boone River Watershed. "The bioreactor won't affect his cropland at all, so he won't have to really manage it at all. Plus, he is going to get improved water quality in the adjacent stream."

Voigts says there are a handful of bioreactors yet to be installed in the Boone River Watershed. Once completed, water flowing through these structures will be monitored and evaluated continuously. "Early data is showing that the bioreactor is filtering out about 75 percent of the nitrates from the water that flows into it."